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ABSTRACT

This paper discusses a study that examined whether 20 typical sixth-grade students and 4 students with special needs in a Strategies Intervention Model (SIM) classroom developed more positive academic and social perceptions over the course of the school year when compared to 22 students in a regular classroom. The SIM is described as a curriculum delivery system that has been designed to address the social interaction needs of students with disabilities. SIM consists of curricular and instructional interventions, collaborative consultation between the classroom teacher and the support services teacher(s) and involvement of external support individuals. Two SIM goals are to develop students who can learn and perform independently and exhibit appropriate classroom social and personal skills. Results indicate that SIM students had more positive social and academic perceptions that non-SIM students in 9 of 11 factors, including teacher personal support, student academic support, student personal support, alienation, cohesion, and academic self-esteem. SIM students' perception was significantly less positive than non-SIM students on classroom competition. Gender differences were also analyzed and data found that SIM females were found to be more positive than males. The critical role of teachers in shaping the classroom environment is emphasized. (Contains 18 references.) (CR)

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Strategies Intervention Model: Promoting Positive Academic and Social Classroom Perceptions in Middle School Students

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The number of special needs students being mainstreamed into the regular classroom is increasing. As a result, classroom teachers are becoming more aware of the need to use appropriate teaching strategies that will enable all students to realize both academic and social success. Social behaviors exhibited by the student in the classroom play a large part in the instructional techniques used by the teachers as well as the student's acceptance by peers (Hartup, 1991, Kemple, 1991). That is, the more positive the social behavior of the student the better the likelihood of classroom social support on whom one can rely for assistance, support and caring.

The classroom learning environment does impact students' academic and social behavior. Middle school environments are often described as having too few student decision making opportunities, negative teacher-student interaction, ability grouping, and excessive discipline (Brophy & Everston, 1976, Eccles & Medgely, 1989, and MacIver & Epstein, 1993). Furthermore, at risk students are more likely to suffer academically and socially in such a classroom.

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Because of special needs students' inability to be successful in a limited learning environment, they tend to act out in the classroom. In turn, they become disliked by their peers (and teachers). Students who are disliked, who are aggressive and disruptive, and who are unable to maintain a relationship with other students are likely to fail in school (Hartup, 1991). Peer rejection and lack of popularity are often connected to special education students (Brantlinger, 1995).

Strategies Intervention Model (SIM), University of Kansas Institute for Research and Learning Disabilities (1988), is an example of a curriculum delivery system that has been designed to address the social interaction needs of students with disabilities. SIM consists of curricular and instructional interventions, collaborative consultation between the classroom teacher and the support services teacher(s), and involvement of external support individuals.

Two SIM goals are to develop students who can (1) learn and perform independently and (2) exhibit appropriate classroom social and personal skills. Such goals are critical because of their relationship to performance in achievement situations (especially in problem solving situations), persistence on challenging tasks under frustrating conditions, academic and career aspirations, resilience, self-reliance, and psychological health (Bowlby, 1969; Johnson, 1980; Sarason, Sarason, & Linder, 1983). Many special education students are not aware of what behaviors are appropriate when. Nor do they have the ability to engage in appropriate behaviors.

Teachers learn how to integrate SIM's task specific strategies through a series of workshops. Teachers learn about specific strategies to implement in their respective classrooms. Teacher support teams can be

formed to meet once a month to share information about implementation and to assess student as well as their own progress.

Method

Initially, four sixth grade classrooms from a school district located in a western state were selected to participate in the study. One classroom had a teacher that was involved in SIM training. The classroom teachers in the remaining three classrooms were not involved in SIM (N-SIM) training. Each classroom was in a separate building. Two months after the study began, two of the three N-SIM classrooms withdrew from the investigation.

The SIM classroom consisted of 24 students, 15 males and 9 females. There were four students classified as special needs students in the SIM classroom. The remaining N-SIM classroom had 22 students, 10 males and 9 females. There were no special needs students identified in the N-SIM classroom.

Given the lack of special needs students in the N-SIM classroom the investigators decided to examine if students in the SIM classroom developed more positive academic and social perceptions over the course of the school year when compared to the students in the N-SIM classroom.

All students were administered the Classroom Life Inventory (Johnson and Johnson, 1985) in fall (November), 1995, and Spring (June), 1996. The Classroom Life Inventory (CLI) measures students' perception of social and academic support in the classroom. The CLI consists of 61 Likert-type questions to which the students indicate on a 5-point scale the truth of the statements. Circling '1' meant the statement was completely false, '3' meant the statement was sometimes true and sometimes false, and '5' meant that the statement was completely true.

The CLI contained 11 factors that have been identified through factor analyses (Johnson & Johnson 1983b, Johnson, Johnson, & Anderson, 1983). The Cronbach alphas for the factors ranged from .61 for academic self-esteem to .80 for teacher personal support.

The definition of each factor is as follows:

*Teacher Academic Support - the teacher cares if I learn
* Teacher Personal Support - the teacher cares about me as a person
* Student Academic Support - my peers care if I learn
* Student Personal Support - my peers care about me as a person
* Cooperation -students work together on projects
* Alienation - how the student feels about school in general
* Extrinsic Motivation - the student does his/her best to please others
* Cohesion - perception that everyone gets along in class
* Academic Self-esteem - I feel good about what I am learning
* Competition - who can be the best in the classroom
* Valuing heterogeneity - who do I like to work with in the classroom

To determine whether students' perceptions of classroom academic and social support changed over time, a *t* test was computed for each CLI factor. Fall scores were compared to Spring scores. The number of statements as well as the maximum score for each factor varied (See Appendix 1). Scores were used instead of means because it was determined that scores would more accurately reflect what, if any, changes occurred over time.

The investigators hypothesized that the SIM student scores when compared to the N-SIM student scores would be more positive in the spring. For eight of the eleven factors, the scores would be higher. The eight factors

were Teacher Academic Support (e.g., My teacher likes to see my work.), Teacher Personal Support (e.g., My teacher really cares about me.), Student Academic Support (e.g., Other students care about how much I learn.), Student Personal Support (e.g., In this class other students like me the way I am.), Cooperation (e.g., I can learn important things from other students.), Cohesion (e.g., My best friends are in this class.), Academic Self Esteem (e.g., I am doing a good job of learning in this class.), and Value Heterogeneity (e.g., I learn more from students who are different than me).

There were three factors where a positive score meant that the students' scores would be lower in June. The three factors were Alienation (e.g., I often get discouraged in school.), Extrinsic Motivation (e.g., I do my school work to keep my teacher from getting mad at me.), and Competition (e.g., I am the happiest when I am competing with other students.)

Analysis of the Data

The analyses of the Fall scores revealed that SIM students had more positive social and academic perceptions than N-SIM students in nine of the 11 factors. From Table I, it can be seen that at the beginning of this investigation SIM students' perceptions were significantly more positive than N-SIM students' in teacher personal support, 15.1, 13.2. $p<.05$; student academic support, 8.3, 6.9, $p<.05$, student personal support, 19.6, 14.8, $p<.05$; alienation, 17.8, 21.7, $p<.01$; cohesion, 15.2, 11.9, $p<.000$; and academic self-esteem, 7.5, 6.1, $p<.001$. SIM students' perception was significantly less positive than N-SIM students' for the competition, 18, 14.8, $p<.05$.

TABLE I ABOUT HERE

For Spring scores, the results in Table I indicate that SIM students' perceptions were significantly more positive than N-SIM students' for three factors; teacher personal support, 17.4, 14.8, p,.05; student personal support, 19.1, 16, p<.09; and cohesion, 15.4, 13.6, p< ,05. SIM students' perceptions were found to be significantly less positive than SIM students' in two factors; valuing heterogeneity, 9.4, 11.1, p<.07; and competition, 18.5, 15, p<.07. While SIM students' perceptions were more positive than N-SIM students for student academic support, alienation, and academic self-esteem; the difference in scores was no longer significant.
One factor, valuing heterogeneity, showed that N-SIM students (11.1) were had significantly more positive perceptions (p<.05) than SIM students (9.4).

Gender analysis

For the purposes of this presentation, the authors decided to further breakdown the five spring factors where a significant difference was calculated by comparing male and female scores within each group and, male and females scores between groups. Researchers found that gender differences begin to widen for this age group (Backes, 1994; Mullis & Jenkins, 1988). Analyzing gender differences may give some insight as to SIM's ability to help students learn in the classroom.

Teacher personal support (TPS). SIM females fall perceptions (16.2) were more positive than males (14.5). When spring scores were analyzed, female perceptions were found to be significantly more positive for the TPS factor than males, 19.1, 16.4, p<.03. There was a significant score increase for females from fall to spring 16.3, 19.1, p<.05 (See Table II). Male perceptions also showed a positive increase for this same time period (14.5, 16.4).

TABLE II ABOUT HERE

Analysis of fall TPS scores for N-SIM students revealed that female perceptions (13.5) was slightly more positive than male perceptions (13). However, when spring scores were analyzed, N-SIM female perceptions were significantly more positive than male perceptions, 16, 12, $p<.05$. There was a significant score increase for females from fall to spring 113.5, 16.5, $p<.005$ (See Table III). Conversely, male perceptions decrease during this same time period, 13, 12.8).

Fall TPS scores for SIM males and N-SIM males were analyzed. Results indicated that SIM perceptions were significantly more positive then N-SIM males, 14.5, 13, $p<.08$ (See Table IV-A). Similar results were revealed when spring scores were analyzed. SIM male perceptions were significantly more positive than N-SIM males, 16.4, 12, $p<.05$ (See Table IV-B).

Examination of fall SIM female and N-SIM scores scores revealed that SIM females were significantly more positive than N-SIM females, 16.2, 13.5, $p<.05$ (See Table IV-A). As with the SIM males, spring perceptions of SIM females were significantly more positive than N-SIM females, 19.4, 12 $p<.05$ (See Table IV-B).

Student personal support (SPS). Table II shows that SIM female perceptions for SPS were more positive in the fall and spring than SIM male perceptions. Of particular interest is that the spring score for males (18) was less positive than the fall score for males (19.6). However, females perceptions became more positive from fall to spring (19.7, 21.1).

For N-SIM students, Table III reveals that males had more positive perceptions in the SPS factor when compared to females. However, no

significant difference was determined. Comparing fall and spring perceptions for males (14.5, 16.5) and females (14.5, 15.8) showed an increase.

TABLE III ABOUT HERE

SIM male perceptions were compared to N-SIM male perceptions for fall and spring. While SIM male fall and spring perceptions (19.6, 18) were more positive than N-SIM males (15.2, 16.4), SIM male perceptions became less positive between fall and spring (See Table IV-A & Table IV-B).

Examination of Table III showed that fall SIM and N-SIM female scores revealed that SIM females were significantly more positive than N-SIM females, 19.7, 14.5, $p<.005$ (See Table IV-A). When spring scores were analyzed, SIM females had significantly more positive perceptions for SPS than N-SIM females, 21.1, 15.8, $p<.025$ (See Table IV-B).

Cohesion. SIM female fall perceptions for cohesion were more positive than males (15, 15,5). As shown in Table III, there was a slight increase in the spring perceptions for SIM females (16) but no change in the perception of SIM males (15).

N-SIM males fall perceptions were more positive than N-SIM females (12.2, 11.6). Male perceptions remain more positive than females when measured in the spring. However, the spring perceptions of females was significantly more positive than their fall perceptions, 11.6, 14.1, $p<.001$ (See Table III).

TABLE IV-A ABOUT HERE

Fall SIM male perceptions for cohesion were significantly more positive

than N-SIM males, 15, 12.2, p<.025 (See Table IV-A). Spring perceptions remained unchanged for SIM males (15) while N-SIM perceptions became more positive (13).

SIM female fall perceptions for cohesion were significantly more positive that N-SIM female perceptions, 15.5, 11.6, p<.000 (See Table IV-A). Examination of spring scores revealed that SIM females continued to be significantly more positive in their cohesion perceptions than N-SIM females, 16, 14.1, p<.09 (See Table IV-B).

Valuing Heterogeneity. SIM male fall perceptions for valuing heterogeneity were more positive than SIM females (10, 8.2). The opposite was true when spring scores were examined. SIM Females (9.7) had more positive scores than in the fall while SIM males (9.2) were found to be less positive.

N-SIM females fall perceptions (10.6) were more positive than N-SIM males (9.2). Both females (11.6) and males (10.6) had more positive scores in the spring.

TABLE IV-B ABOUT HERE

Fall scores showed that SIM males (10) were more positive than N-SIM males (9.2). The opposite was found in the spring scores. SIM males (9.2) became less positive and N-SIM males(10.6) had more positive scores in the valuing heterogeneity factor.

N-SIM females were significantly more positive than SIM females in the valuing heterogeneity factor, 10, 8.2, p<.025 (See Table IV-A). Spring

scores revealed that N-SIM (11.6) were more positive than SIM females (9.7).

Competition. SIM female fall perceptions for competition were more positive than males (16, 19.2). However, examination of spring scores revealed that male perceptions (18.4) became more positive while female perceptions (18.5) became more negative.

Table III shows that N-SIM female fall perceptions were significantly more positive than male perceptions for the competition factor (13, 17, $p<.05$). N-SIM female perceptions (13.6) remained more positive than N-SIM male perceptions (16.6), became more positive. However, examination of spring scores revealed that male perceptions actually became more positive in the spring while female perceptions were less positive.

SIM male competition perceptions were less positive than N-SIM perceptions for fall (19.2, 17). For spring, both SIM (18.4) and N-SIM (16.6) scored more positively in the competition factor.

As with SIM males, SIM female competition perceptions were less positive than N-SIM females for fall (16.1, 13). However, examination of spring scores revealed that SIM female perceptions became significantly less positive than N-SIM female perceptions, 18.5, 13.6, $p.<05$ (See Table IV-B).

Discussion

The results of this investigation indicate that the more SIM students perceive their teachers as being both academically and personally supportive and enhancing. Perceiving teachers as caring about students as individuals and perceiving students as caring about how much each other learns can result in learning experiences that affects classroom climate.

Between November and June, students became more positive about participating in cooperative learning experiences, working with classmates, felt more responsible for ensuring that classmates managed the school work assigned in the classroom, and felt encouraged to learn from peer's. However, it should be noted that the aforementioned comments can be applied to the N-SIM students as well.

The results of this investigation were unique in that SIM students became more competitive with classmates over the school year. As a result, students became less confident in their ability to academically succeed and felt more pressure to complete school work to please the teacher as well as peers. Concomitantly, for this same time period, SIM students perceived the students with the class as becoming less friendly, and felt more alienated from school and classmates. These results may indicate that the more competition is used in the classroom, the less positive the effects on classroom social support.

Academic and social perceptions are shaped through school and classroom practices. Before any conclusions from this investigation can be applied, additional data should be collected and analyzed. For example, it is not know what impact, if any, the four special education students had on the overall academic and social classroom life for the SIM room. The classification level of the special education, how these students were serviced, and their response to this service may have had an impact on the class as a whole.

Another area where more information is needed is to examine the classroom teaching environment. The SIM teacher strategies call for thestudent to learn how to work independently and to use positive social

and performance skills. However, if the teacher views working independently as working alone in competition with classmates the teacher inadvertently may be contributing to student alienation. Researchers in classroom organization stress the importance of teachers having a 'real' curriculum (Glasser, 1986) as well as seeking and valuing the students' point of view (Brooks and Brooks, 1993).

Finally, gender differences can not be overlooked. As students enter adolescence many educators report a general decline in school performance among girls (Backes, 1994). This decline can be attributed to both in and out of school experiences. While boys are more prone to be supported for risk taking behaviors; studies have reported that adolescent girls have already been conditioned to be kind and obedient (Brown & Gilligan, 1993; McDonald and Rogers, 1995). Analyzing the individual statements for each factor may provide additional clues as to gender differences.

Classroom teachers can shape the classroom environment so that all students can contribute to the overall success of each student. By assuring that each student's contribution are valued and creating an environment is which students can express opinions, make mistakes, and participate in the learning process without fear can create positive perceptions in middle school students.

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Table I
CLI Factors: Comparison of Fall and Spring SIM Student Scores to Fall and Spring N-SIM Student Scores

	Maximum Score	Fall SIM (N=24)	Fall N-SIM (N=22)		Spring SIM (N=24)	Spring N-SIM (N=22	
Teacher Academic Support (4*)	20	16.4	15.6		18	16.8	
Teacher Personal Support (4)	20	15.1	13.2	(p<.05)	17.4	14.8	(p<.05)
Student Academic Support (3)	15	8.3	6.9	(p<.05)	8.5	7.6	
Student Personal Support (6)	30	19.6	14.8	(p<05)	19.1	16	(p<09)
Cooperation (7)	35	25.1	23.1		25.1	24.6	
Alienation (8)	40	17.8	21.7	(p<.01)	19	21.2	
Extrinsic Motivation (5)	25	9.9	9.1		10.7	9.22	
Cohesion (4)	20	15.2	11.9	(p<.001)	15.4	13.6	(p<.05)
Academic Self-esteem (2)	10	7.5	6.1	(p<.001)	7.3	6.7	
Valuing Heterogeneity (4)	20	9.3	9.6		9.4	11.1	(p<.07)
Competition (7)	35	18	14.8	(p<.05)	18.5	15	(p<.07)

*Denotes the number of questions per factor.

Table IV-A: Fall Social and Academic Perception Scores for SIM and N-SIM Males and Females

	Maximum Score	SIM Males (N=15)	N-SIM Males (N=10)	SIM Females (N=9)	N-SIM Females (N=12)
Teacher Personal Support (4)	20	14.5	13	16.2	13.5(p<.05)
Student Personal Support (6)	30	19.6	15.2 (p<.05)	19.7	14.5 ([<.005)
Cohesion (4)	20	15	12.2 (p<.025)	15.5	11.6 (p<.000)
Valuing Heterogeneity (4)	20	10	9.2	8.2	10 (p<.025)
Competition (7)	35	19.2	17	16.1	13

Table IV-B: Spring Social and Academic Perception Scores for SIM and N-SIM Males and Females

	Maximum Score	SIM Males (N=15)	N-SIM Males (N=10)	SIM Females (N=9)	N-SIM Females (N=12)
Teacher Personal Support (4)	20	16.4	12 (p<.05)	19.1	16.5 (p<.08)
Student Personal Support (6)	30	18	16.4	21.1	15.8 (p<.02)
Cohesion (4)	20	15	13	16	14.1 (p<.09)
Valuing Heterogeneity (4)	20	9.2	10.6	9.7	11.6
Competition (7)	35	18.4	16.6	18.5	13.6 (p<.05)

Table III: N-SIM Male and Female Fall and Spring Social and Academic Perception Scores

		N-SIM MALES N=15		N-SIM FEMALES N=9	
	Maximum Score	Fall	Spring	Fall	Spring
Teacher Personal Support (4)	20	13	12.8	13.5	16.5 ($p<.005$)
Student Personal Support (6)	30	15.2	16.4	14.5	15.8
Cohesion (4)	20	12.2	13	11.6	14.1 ($p<.001$)
Valuing Heterogeneity (4)	20	9.2	10.6	10	11.6
Competition (7)	35	17	16	13	13.6

Table II: SIM Male and Female Fall and Spring Social and Academic Perception Scores

		SIM MALES N=15		SIM FEMALES N=9	
	Maximum Score	Fall	Spring	Fall	Spring
Teacher Personal Support (4)	20	14.5	16.4	16.3	19.1 ($p<.02$)
Student Personal Support (6)	30	19.6	18	19.7	21.1
Cohesion (4)	20	15	15	15.5	16
Valuing Heterogeneity (4)	20	10	9.2	8.2	9.7
Competition (7)	35	19.2	18.4	16.1	18.5